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FISHES FROM RIO JURUA AND RIO PURUS, BRAZILIAN AMAZONAS

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The Museum has received from B. A. Krukoff a collection of fishes made during 1934 in the following localities.

Rio Jurua: collected in the vicinity of the mouth of Rio Embira, a tributary of Rio Tarauaca, which, in turn, is a tributary of Rio Jurua (70° 15′ W., 7° 30′ S.).

Rio Purus: collected in the vicinity of the mouth of Rio Macauhan, a tributary of Rio Yaco, which, in turn, is a tributary of Rio Purus (69° W., 9° 20′ S.).

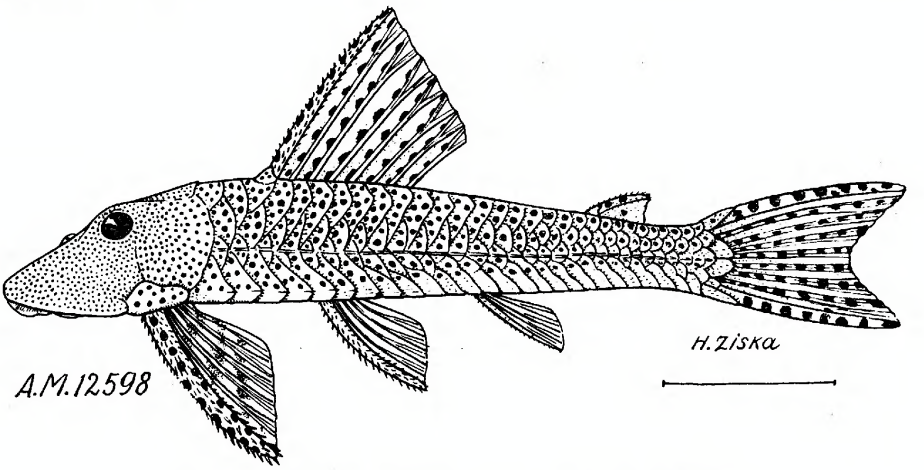

Fig. 1. *Plecostomus micropunctatus*, new species.

Plecostomus micropunctatus, new species

DESCRIPTION OF TYPE.—Number 12598, American Museum of Natural History; collected in the Rio Purus, Brazil, 1934, by Boris A. Krukoff.

Length to base of caudal, 108 mm.; depth in this length, 6.5; head, to hind edge of occipital process, 3.4 Eye in head, 6.5–7; interorbital, 2.9; snout, 1.9–2; width of mouth, 3.25; adipose, 3.9; pectoral spine, 1.2; head depth at occiput, 2. Occipital keeled, bordered on its posterior margin by a median and two lateral scutes. Scutes spinulose, not carinate except for a faint indication of keels on either side from the dorsal to the adipose and on the lowest row; 29–30 in longitudinal series, 9 between dorsal and adipose, 11 (+2 on the caudal base) between anal and caudal. Lateral line distinct, 30.

Dorsal I, 7; anal I, 4. Pectoral spine curved and wide, its greatest width very slightly less than eye. All fin spines covered with spinules. Pectorals with teeth all the way to tip on the posterior margin; on the anterior margin large tooth and two small ones alternate all the way to tip. Lower surface of body covered with small very spinulose scutes. Teeth (entire jaw) $\frac{24}{22}$. Barbel slightly longer than or equal to eye. Caudal deeply emarginate, filamentous.

Body elongate, compressed, profile sharply rising to eye, then more gradually to the dorsal origin. Caudal peduncle compressed, its least depth about 3 in its length. Head large, snout narrowly rounded in the type, more pointed in smaller specimens. Interorbital slightly convex, thus making the orbital ridge.

Color in preservative light brown, the ground color of the head and the posterior part of body from the fifth scute behind the pectoral origin lighter. Head thickly covered with very small dark dots except for an unmarked, very spinulose rim from the opercle forward and around the edge of the head to about one-fourth of eye. Dark patch immediately in front of the occipital process. Body spotted, the spots larger than those on the head, about 6 to a scute for four or five scutes, then 3, then, from opposite adipose to the caudal base, 2 or 1. No spots on ventral surface of either the body or the fin spines. There are 10 small distinct black spots on the dorsal spine, and 6 to 8 on all inter-radial membranes, squeezed up close to the next ray. Two rows of spots on pectoral spine; faint spots on ventral spine and rays, and on adipose spine and membrane. Ventrals dark-tipped. The anal seems to have been lightly spotted. Caudal with six or seven rows of spots across it, the spots on the rays, not the membranes. No spots on outer unbranched ray of lower lobe. From the fifteenth scute back of clavicle and below the lateral line to base of caudal, there are no markings visible except faint indications of one row of dots just below the lateral line. All the dots referred to in the color pattern are about one-half the size, or less (on head), of those of *emarginatus* or any of the other dotted *Plecostomus*, except perhaps the type of *madeirae*. I do not believe the color pattern of the spotted species of *Plecostomus* to be diagnostic except possibly in the general size of the spots.

This species is near *P. madeirae* Fowler from the Madeira River, Brazil. The chief differences lie in the lesser head and body depths of ours, its greater mouth width, its shorter adipose spine. In *P. madeirae* the gill opening is bordered with slightly enlarged spinules; ours has none. The lateral line of *madeirae* is "evident as 8 simple, small pores"; in ours it is well defined for the entire body length. The lower caudal lobe is the longer in *madeirae;* the upper, the longer in ours. In *madeirae* the posterior sides of the body are described as immaculate and whitish; ours differs from this as described above. Fowler compares his specimen with *P. cordovae* from the Argentine, a longer and more slender fish. Alipio de Miranda Ribeiro (Rev. Mus. Paulista, 1918, vol. 10, p. 629) describes *P. interruptus* from Rio Juquiá, which seems to be near ours, the description, however, is incomplete, the fish is not figured, and the type is not available to us. *P. tenuicauda* Steindachner is also near, but has fewer scutes, more teeth, and a shorter caudal peduncle.

Type and 4 cotypes	108, 103, 90, 86, 76 mm.	Rio Purus
1 specimen	127 mm.	Rio Jurua

Hemiancistrus brevis, new species

DESCRIPTION OF TYPE.—Number 12602, American Museum of Natural History; collected in the Rio Purus, Brazil, 1934, by Boris A. Krukoff. Our only specimen.

Length to base of caudal, 91 mm.; depth in this length, 4; head, 3. Eye in head, 6.7; interorbital, 2.1; snout 1.8. Mandibular ramus in interorbital, 3; eye in interorbital, 3. Width of head in its length, 1.1; its depth, 1.5. Barbel, 0.1 greater than diameter of eye. Teeth, on one ramus, $\frac{13-14}{13-14}$, very sharply hooked. Supra-occipital bordered by a median and one lateral scute. Hooked bristles on opercle. Scutes, 25 in longitudinal series, very spinulose, carinate only on the row either side of

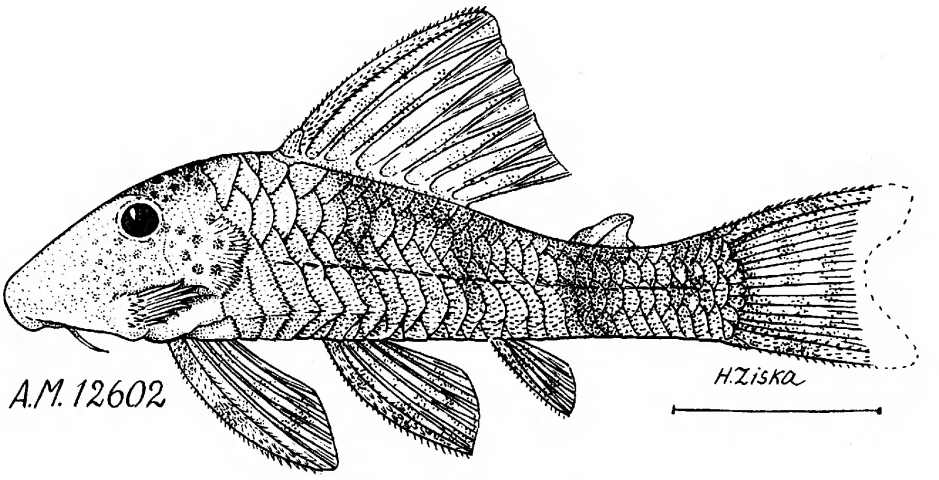

Fig. 2. *Hemiancistrus brevis*, new species.

dorsal to adipose, and the three scutes behind the clavicle. Abdominal surface granular except for naked strip across and above ventrals. Caudal broken; caudal peduncle, 2 in its length.

Dorsal, I, 8; anal, I, 4. Spines not pungent.

Ground color in preservative; buff; small, dark spots on head, darker between center of eyes and back to occipital process. Body with darker blotches arranged in four irregular bars, the first behind the dorsal origin; second, at end of dorsal base; third at adipose origin, and the fourth and most irregular, before the caudal base. Fins all spotted and blotched, the blotches becoming bands on the caudal. Traces of mottling on the lower surface of the body.

This species is deeper than any of those previously described except *megacephalus*, with which it does not agree in other characters.

Panaque purusiensis, new species

DESCRIPTION OF TYPE.—Number 12600, American Museum of Natural History; collected in the Rio Purus, Brazil, 1934, by Boris A. Krukoff. Our only specimen.

Length to base of caudal, 114 mm.; depth in this length, 4.4; head, to posterior margin of temporal plate, 3. Eye in head, 9; interorbital, 2.4; snout, 1.7. Head nearly as long as broad, and one and three-quarters times as long as deep. Six spoon-shaped teeth on each ramus of the upper jaw, 5 on each ramus of lower jaw. Snout narrowed anteriorly, supraorbital edges only slightly raised. Supraoccipital with very low median ridge, ending posteriorly in a point; temporal plates not carinate; interoperculum armed with a bunch of bristles, permanently everted, the longest one-fourth the length of head. Scutes spinulose, very weakly carinate, most so on either side of the dorsal and on the anterior five scutes following the clavicle. Not carinate on peduncle except the last two rows which are very weakly so; 25 scutes

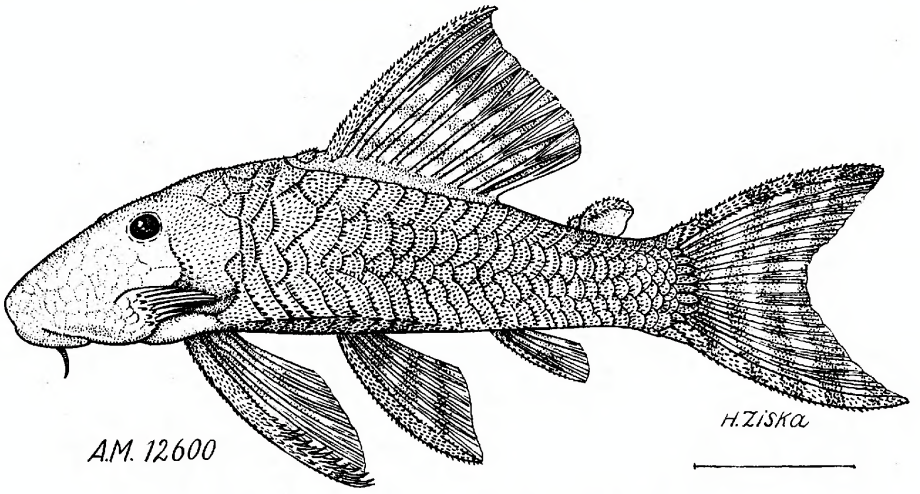

Fig. 3. *Panaque purusiensis*, new species.

in longitudinal series, 5 between dorsal and adipose, 11 between anal and caudal. Supraoccipital bordered posteriorly by 3 scutes on each side. Lower surface of head and abdomen completely covered with small granular scales.

Dorsal, I, 8, the last ray attached to the following scute by an inconspicuous membrane. Length of the base of dorsal (measured, after Regan, from first branched ray to last, exclusive of spine and of membrane following the last ray) equal to the distance three-fourths of the way to the tip of adipose. Anal, I, 4. Pectoral spine extending to middle of ventral fin. Caudal deeply emarginate; caudal peduncle twice as long as deep.

Color in preservative olivaceous with faint traces of alternate light and dark stripes from the back of the head to the caudal base, and on the sides of the body. All fins with about three dark bands which begin on the spines and may be composed of large dots; two bands on the adipose. The ventral surface is faintly mottled as if there had been dark markings.

This species differs from others described in the number of scutes bordering the supraoccipital; in its depth; the fact that the temporal plates are not carinate; its dorsal count, the length of the interopercular spines; and the tooth count which is lower than that of the other species.

Harttia filamentosa, new species

DESCRIPTION OF TYPE.—Number 12616, American Museum of Natural History; collected in the Rio Jurua, Brazil, 1934, by Boris A. Krukoff.

Length to base of caudal, 145 mm.; depth in this length, 7.3; head, to posterior end of occipital process, 5.2. Eye in head, 7, interorbital, 3; snout, 1.7. Head twice as long as deep; no orbital notch. Teeth setiform. Barbel minute. Scutes 28 in lateral series. There are no keels in front of the dorsal; from behind the dorsal base there is a dorsal series of plate-like scutes, smooth and enamel-like except for a small spinulose patch on the lateral edges and the posterior denticulate margin. The

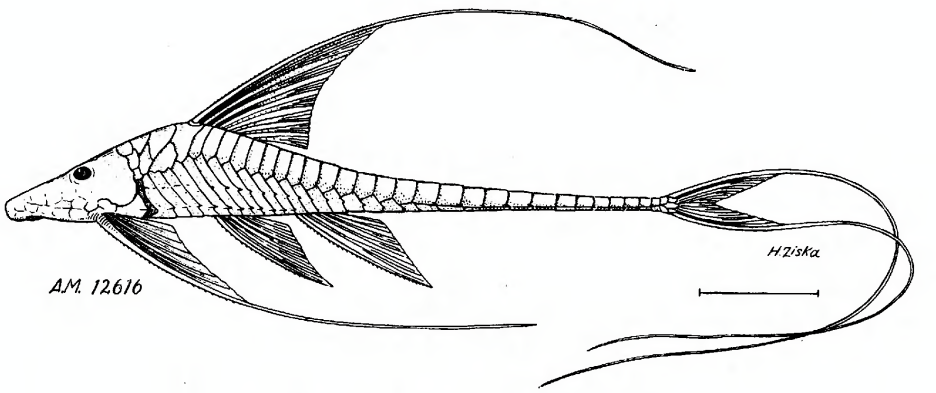

Fig. 4. *Harttia filamentosa,* new species.

second series of scutes below the origin of the dorsal is weakly bicarinate for about 7 scutes. These and the lateral series are more or less carinate from shoulder to tail; the lateral and the series above it approximate on the sixteenth scute and fuse shortly after. The ventral surface is covered with spinulose scutes up to the margin of the lower lip. There are 10 lateral plates with numerous smaller ones in between, about 7 series in mid-abdomen, 13 just before origin of pectoral.

Dorsal, I, 7; anal, I, 5. The dorsal filament reaches to beyond the base of the caudal; the pectoral filament reaches half the length of the longest anal ray beyond the anal; the caudal filaments, on both lobes, are four times the length of the longest caudal rays.

Color in preservative light pinkish-brown on body; yellowish on head. There is a slightly curved, darker band about two orbits wide running from just below the posterior border of eye forward to below the rim of the snout. A round dark spot about an orbit in diameter lies in the center of the occipital process. A dorsal stripe begins

behind the dorsal base and runs down the dorsal series of scutes; this is made up of a dark spot in the center of each pinkish plate-scute; a median longitudinal stripe begins in the middle of the body about under the dorsal origin and runs down below the posterior base of the dorsal to the marginal scutes, and thence to the caudal base.

The spine, filament, and first two and a half dorsal rays and their membranes are blackish. Pectoral spine and filament are unmarked, light, but there are dots or blotches on the upper half of the fin. The first branched anal ray is black. Caudal has one and a half rays next the outer black on both lobes.

Cotype 161 mm. Rio Jurua

Because of the small amount of material previously collected from this locality, I am listing the entire Krukoff Amazonas collection below. The asterisk (*) indicates not previously recorded for either locality. When not otherwise indicated, specimens were brought in from both Rio Purus and Rio Jurua. No previous records of material listed below are from Rio Purus.

ASPREDINIDAE

* *Bunocephalus bicolor* Steindachner.....Jurua

SILURIDAE

Pimelodus clarias (Bloch)

* *Pimelodella cristata* (Müller and Troschel).....Purus

* *Duopalatinus goeldi* (Steindachner)

Hemisorubim platyrhynchos (Cuvier and Valenciennes)

Sorubim lima (Bloch and Schneider)

* *Sorubimichthys planiceps* (Agassiz).....Jurua

* *Doras granulosus* Valenciennes.....Jurua

Hemidoras bachii Boulenger

In specimens from both localities, the maxillary barbel is fringed.

CALLICHTHYIDAE

* *Callichthys callichthys* Linnaeus.....Jurua

* *Hoplosternum littorale* (Hancock).....Purus

LORICARIIDAE

* *Plecostomus plecostomus* (Linnaeus).....Jurua

P. emarginatus (Cuvier and Valenciennes)

* *P. micropunctatus*, n. sp.

* *P. spinossissimus* Steindachner.....Purus

* *Hemiancistrus brevis*, n. sp.....Purus

* *H. bachii* (Boulenger).....Purus

* *Lasiancistrus pictus* (Castelnau).....Purus

* *Panaque purusiensis*, n. sp.....Purus

* *Panaque cochliodon* (Steindachner).....Purus

There seems to be no adequate color description of this species in the literature.

Ground color (of specimen 114 mm.), in preservative, lightish buff. Very small dark spots profusely and irregularly scattered over head from anterior margin of eye forward. From same point backward, the spots

become larger, increasing in size toward the caudal until they are blotches. Two spots on adjacent scutes are often confluent. On the occipital process there is a central dot on either side of the ridge, encircled by about five others. Spots on the posterior surface irregular and faint.

* *Ancistrus temminckii* (Cuvier and Valenciennes).....Purus
Loricaria cataphracta Linnaeus.....Jurua
* *L. maculata* Bloch.....Jurua
L. lima Kner.....Jurua

A variety of this, *L. lima microlepidota*, is described by Steindachner (1907, Anz. Akad. Wien, XLIV, p. 152) from Jurua.

* *L. evansii* Boulenger.....Purus
* *L. lamina* Günther.....Purus
* *L. carinata* Castelnau.....Purus
* *L. phoxocephala* Eigenmann and Eigenmann.....Purus
* *Harttia filamentosa*, n. sp.....Jurua
* *Sturisoma lyra* Regan

It is interesting to note that there is no variation of characters in six specimens ranging from 113 to 174 mm.

Farlowella gladius (Boulenger).....Jurua

CHARACIDAE

* *Psectrogaster rhomboides* Eigenmann and Eigenmann.....Purus
* *Psectrogaster amazonica* Eigenmann
* *Curimatella serpae* (Eigenmann and Eigenmann).....Purus
* *Curimatus leuciscus* Günther.....Purus
* *C. laticeps* Cuvier and Valenciennes.....Purus
* *C. latior* (Spix)
* *C. isognathus* Eigenmann.....Purus
* *C. elegans* Steindachner.....Jurua
* *C. spilurus* Günther.....Jurua
* *Prochilodus nigricans* Agassiz
* *Schizodon fasciatus* (Spix).....Purus
* *Leporinus frederici* Bloch.....Purus
* *L. nigrotaeniatus* (Schomburgk).....Purus
* *Brycon hilarii* (Cuvier and Valenciennes).....Jurua
* *Astyanax* sp. probably *gracilior*.....Jurua
* *A. maximus* (Steindachner).....Jurua
* *Tetragonopterus argenteus* Cuvier
* *Chalceus macrolepidotus* Cuvier.....Jurua
Gasteropelecus stellatus Kner.....Purus
* *Carnegiella strigata* (Günther).....Jurua
Thoracocharax sp.....Jurua
* *Chalcinus angulatus* Spix
* *Stethaprion crenatus* Eigenmann.....Purus
* *Serrasalmo rhombeus* (Linnaeus).....Purus
* *S. maculatus* Kner.....Jurua
Mylosoma albiscopus (Cope)
Hydrolycus pectoralis (Günther).....Purus
* *Charax gibbosus* (Linnaeus).....Purus

C. limaesquamis (Cope).....Jurua
* *Roeboides myersii* Gill.....Jurua
* *Eucynopotamus humeralis* (Valenciennes).....Purus
* *Salminus hilarii* Cuvier and Valenciennes.....Purus
* *Hoplias macrophthalmus* (Pellegrin).....Purus
* *Hoplerythrinus unitaeniatus* (Spix).....Jurua

GYMNOTIDAE

Eigenmannia virescens (Boulenger).....Purus
* *Sternopygus macrurus* (Bloch and Schneider).....Purus

SCIAENIDAE

* *Plagioscion surinamensis* (Bleeker).....Purus
* *Pachyurus bonariensis* Steindachner.....Purus

CICHLIDAE

* *Acara tetramerus* Heckel.....Purus
* *A. vittata* Heckel.....Purus

SOLEIDAE

* *Achirus jenynsii* (Günther)